Just preceding the onset of the Persian Gulf War in 1991, military planners realized there was a significant need for battlefield detection of biological warfare agents. As detectors were developed and deployed, the ability to confirm what the detectors were "seeing" was crucial to add confidence for battlefield, medical, and National Command Authority decisions. The requirement for a deployable biological warfare agent confirmation laboratory was born. With development and deployment of BW agent detection assays, the need for transition to field deployment and subsequent training of personnel was necessary. A training course was developed to train individuals in polymerase chain reaction and enzyme linked immunosorbant assays. Currently, the course offers the most advanced fieldable technologies for confirming biological warfare agents.

The Army's initial deployable laboratory was the 520th Theater Army Medical Laboratory (TAML) which has been deployed in support of several missions. Following Operation Iraqi Freedom in 2003, the 520th TAML was reorganized into the 1st and 9th Area Medical Laboratories (AML). These units form the foundation for deployable biological warfare agent detection systems in the Army medical system.

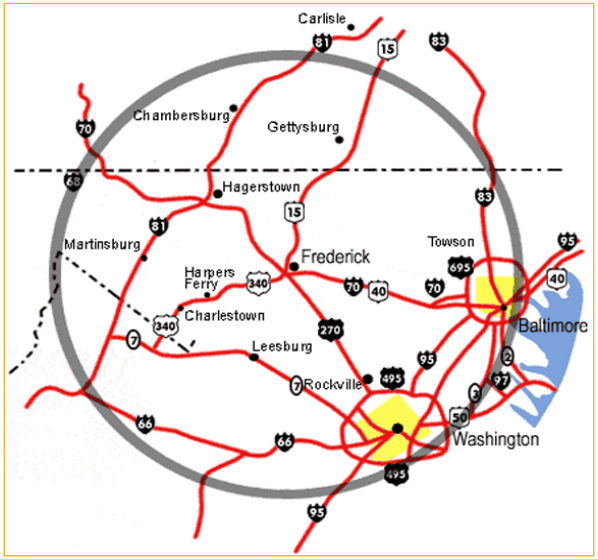
Following the completion of this course, students are trained to set-up, maintain, and operate a deployable confirmatory laboratory under field conditions. The deployed laboratory capability serves as Theater and Combatant Commanders', as well as the Theater Surgeon's resource for biological warfare testing.

Field Training Site

The United States Army Medical Research Institute of Infectious Diseases conducts basic and applied research on biological threats resulting in medical solutions to protect the War Fighter.

Contact Information:

Field Operations and Training
USAMRIID
1425 Porter Street
Fort Detrick, MD 21702
301-619-8383/8656
DSN: 343-8383/8656



Fort Detrick is located in Frederick Maryland approximately 48 miles northwest of Washington, D.C. and 54 miles east of Baltimore Maryland. The FIBWA training site is located just west of the main Fort Detrick post in an area known as Area B.

Nearby Airports include Baltimore Washington International, Dulles International, and Reagan Washington National.

FIBWA

Field Identification of Biological Warfare Agents

Diagnostic Systems Division

United States Army Medical Research Institute of Infectious Diseases

Since the FIBWA course was first offered in 1999 students from all three services have attended the courses. Because of increased demand for these highly specialized courses, training opportunities were increased in November 2003 with the addition of new training facilities. The new facilities provide laboratory capability for 8 students per class retaining the individualized instruction process. In 2005, the National Guard Bureau began using the FIBWA training program as the basis for the biological component of their Civil Support Teams (CST). These teams, assigned to each state, form the foundation of a highly specialized state response element.

R.A.P.I.D./JBAIDS
(IDAHO Technologies)

BV™ "M1M Series"

While this course is designed for organizations within DoD, special considerations can be made for other governmental agencies. The basis for the equipment and technology is integrated with the Joint Program Executive Office for Chemical and Biological Defense (JPEO-CBD). Concepts of Operations and reagents are continually evaluated and transitioned to the field and into the training program to insure that FIBWA training is on the "Cutting Edge". In 2005, the four week FIBWA course was vested academic accreditation. Undergraduate and graduate level credit is available through a partnership with James Madison University (Harrisonburg, Virginia).

FIBWA training consists of five different modules:

1) **FIBWA Course**
2) **FIBWA Managers Course**
3) **FIBWA NGB CST**
4) **FIBWA Train-the-Trainer Courses**
5) **FIBWA Special Interest Training Courses**

The full **FIBWA Course** is 20 working days in duration (4 weeks). The course outline is listed to the right. The field situational training exercise provides an opportunity to integrate the training with real-world scenarios that challenge the student's understanding and skills.

The **FIBWA Managers Course** is a three-day program designed to introduce leaders to management of biological warfare agent identification. Emphasis will include laboratory operations and understanding assay use and limitations. Hands-on opportunities for performing assays are also provided.

FIBWA Train-the-Trainer and **Special Interest Training Courses** are adapted to customer requirements. Courses can range from days to weeks depending on the breadth of information needed and any requirements for certifications. Examples of this training include train-the-trainer sessions or training newly fielded technologies.

Laboratory Work Station

Typical Course Syllabus

***Overview, Bio-safety, and Intro to Lab Operations (2 days)*:**

The Primary objectives and didactic plan will be outlined. BW history, Lab Concepts, Current Techniques, and Lab Operations in a Field Environment will be discussed. Students will be introduced to the fundamentals of bio-safety and basic lab skills. Bio-safety will be continually evaluated throughout laboratory exercises.

***Nucleic Acid Extraction and polymerase chain reaction (PCR) (9 days)*:**

Students will be familiarized with the theory and practice of detecting agents in unknown samples using nucleic acid based assays. The students will be trained on multimedia DNA extraction protocols such as QIAgen, IsoStix, extraction of DNA from soil, boil preps from cultures, extraction of RNA for RT- PCR, configuration of R.A.P.I.D./JBAIDS reaction profiles, thermal-cycler operation and maintenance, and gel electrophoresis.

***Electrochemiluminescence (ECL) (4 days)*:**

Students will be familiarized with the theory and practice of detecting agents (bacteria and toxins) in unknown samples using BioVeris' (BV™) electrochemiluminescent technology. Students will be trained on multimedia sample preparation, ECL procedures, and analysis of results. Protocols for major threat agents will be reviewed.

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***Field Operations (1 day)*:**

Discussion will focus on operational issues that the students may be faced with, the decision-making process, and long-range support. Sample flow and laboratory design will be discussed and students will participate in tabletop exercises.

***Situational Training Exercise-STX (3.5 days)*:**

Students will be given 4 scenarios to respond to during this block of instruction. The students will be required to set up and operate a lab under field conditions. The students will be evaluated on how well they respond and problem solve throughout the exercise. Students will be expected to demonstrate an understanding of the Concept of Operations that they have been trained to follow.

Course Critique/After Action Review (.5 day):

Students will be given an opportunity to give comments on training and ask questions of key personnel within the department. Certificates will be issued.